

ALBERTA GAMBLING RESEARCH INSTITUTE CONFERENCE  
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# Exploring trends in Canadian gambling research: Publication alignment with the Conceptual Framework of Harmful Gambling

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**greo**



# Disclosure of potential conflict of interest

→ Margo Hilbrecht:

- I have no potential conflicts of interest for my presentation.

→ David Baxter:

- I have no potential conflicts of interest. I am currently funded by an AGRI graduate scholarship, and I was previously an employee of Greo.

# Transparency statement

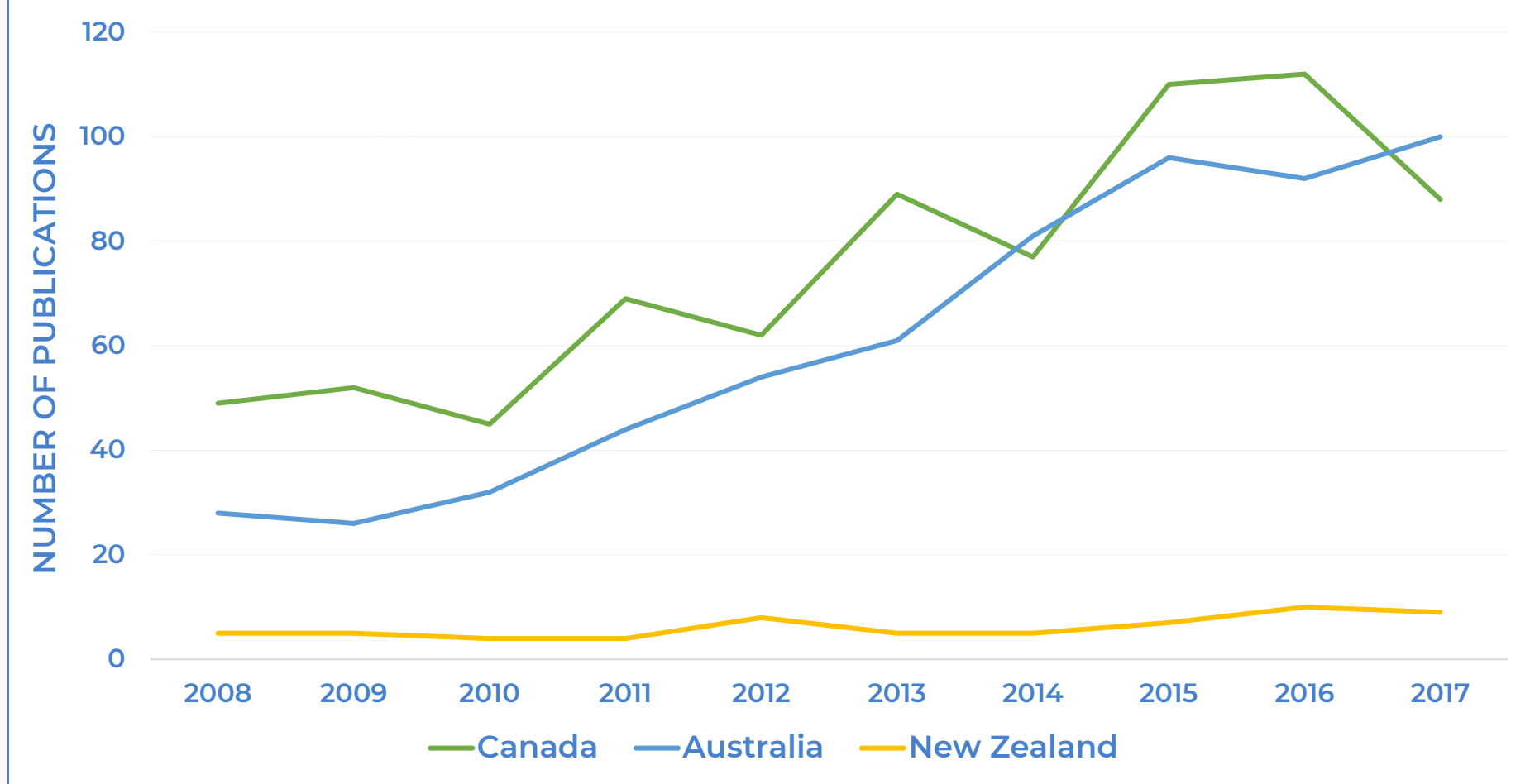
- Greo is a not-for-profit that works with organizations and researchers to mobilize research across the health and wellbeing sectors, including safer gambling and harm reduction.
- Greo acts as an independent third-party to manage research initiatives with a focus on integrity and intellectual freedom of researchers. Greo also delivers knowledge translation services and has received funds in the last three years from:
  - Within Canada - Ontario Ministry of Health and Long-term Care, social responsibility arms of Canadian crown corporations with conduct and manage responsibilities, non-profits and charities, and post-secondary institutions
  - Internationally – New Zealand Ministry of Health, Regulatory settlement funds (Great Britain), third-sector charities (Great Britain)

# Background to the study

# Exploring gambling studies literature

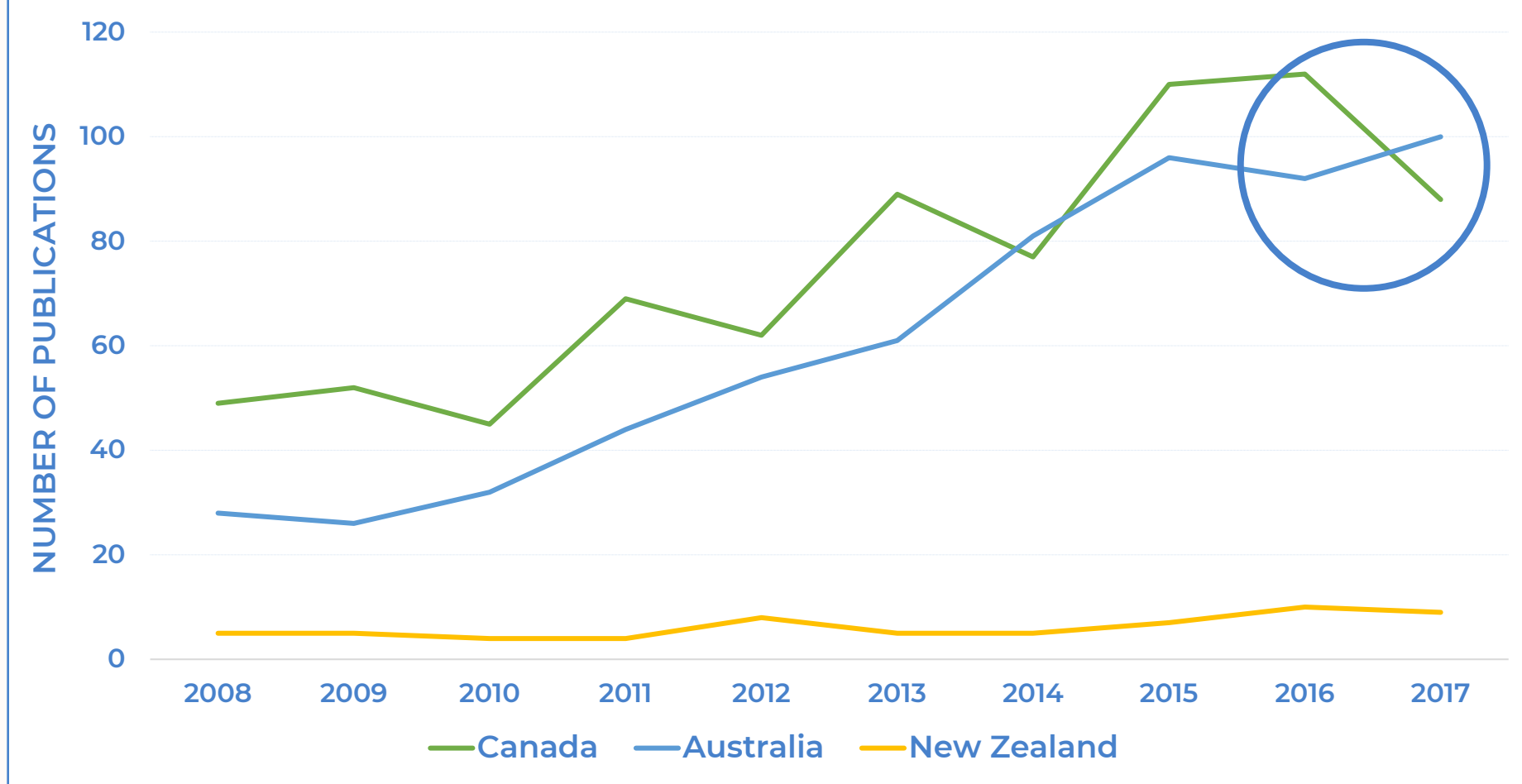
- Conceptual Framework of Harmful Gambling (CFHG) as an organizing framework for Greo's Evidence Centre
- Learnings from an earlier bibliometric study (Baxter, Hilbrecht & Wheaton, 2019):
  - 2008 - 2017 alignment with Conceptual Framework of Harmful Gambling (CHFG) comparing Canada, Australia, and New Zealand
  - Notable international differences in the balance of publications
  - Jurisdictional policy and regulation reflected in factor coverage
- Why we are extending this research

## GAMBLING STUDIES PUBLICATIONS MAPPED TO THE CFHG BY COUNTRY AND YEAR, 2008 TO 2017



Baxter DG, Hilbrecht M, Wheaton CTJ. A mapping review of research on gambling harm in three regulatory environments. *Harm Reduction Journal*. 2019;16(1):12

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# Study Overview



# The present study

- Increased focus internationally on gambling as a public health issue
- A **public health approach** considers multiple factors external to the individual, and the full risk spectrum
- Requires a body of evidence with the strengths and understandings of multiple disciplines
  - Inform new understandings of harmful gambling and its association with a range of individual, social, and economic inequalities
- The **Conceptual Framework of Harmful Gambling (CFHG)** can be used to organize evidence to identify literature aligned with public health and medical models of gambling policy

# Models of gambling policy

## Public Health Model

- Emphasis on whole population
- Well functioning community goal
- Focus on behaviours and environment
- Policy tools = regulation and social policy
- Multiple government departments responsible
- Bureaucrats are decision makers

## Medical Model

- Emphasis on problem gamblers
- Effective treatment goal
- Focus on pathologies
- Policy tool = funding for treatment
- Health department responsible
- Health professionals are decision makers

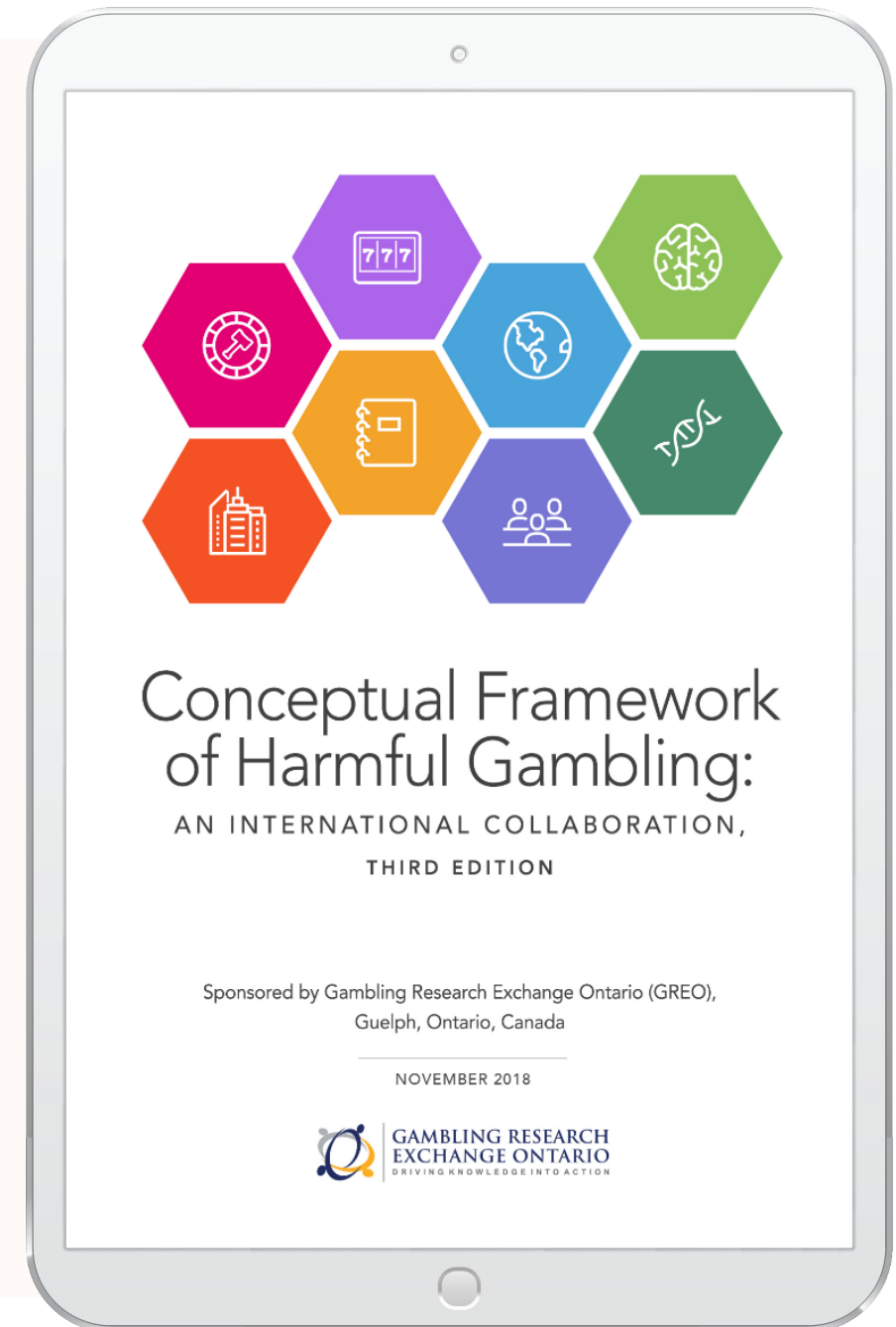
# Conceptual Framework of Harmful Gambling (CFHG)

An internationally relevant framework of factors that can lead to harmful gambling, coauthored by an international panel of experts

- 1st ed. 2013 - Commissioned by OPGRC
- 2nd ed. 2015, 3rd ed. 2018 - Revisions led by Greo

Abbott, Max; Binde, Per; Clark, Luke; Hodgins, David; Johnson, Mark; Manitowabi, Darrel; Quilty, Lena; Spångberg, Jessika; Volberg, Rachel; Walker, Douglas; Williams, Robert. (2018). *Conceptual Framework of Harmful Gambling: An International Collaboration, 3rd Ed.* Gambling Research Exchange Ontario (GREO), Guelph, Ontario.

<https://doi.org/10.33684/CFHG3.en>



# CFHG: structure



# Canadian gambling studies research alignment with CFHG factors, 2008 to 2019

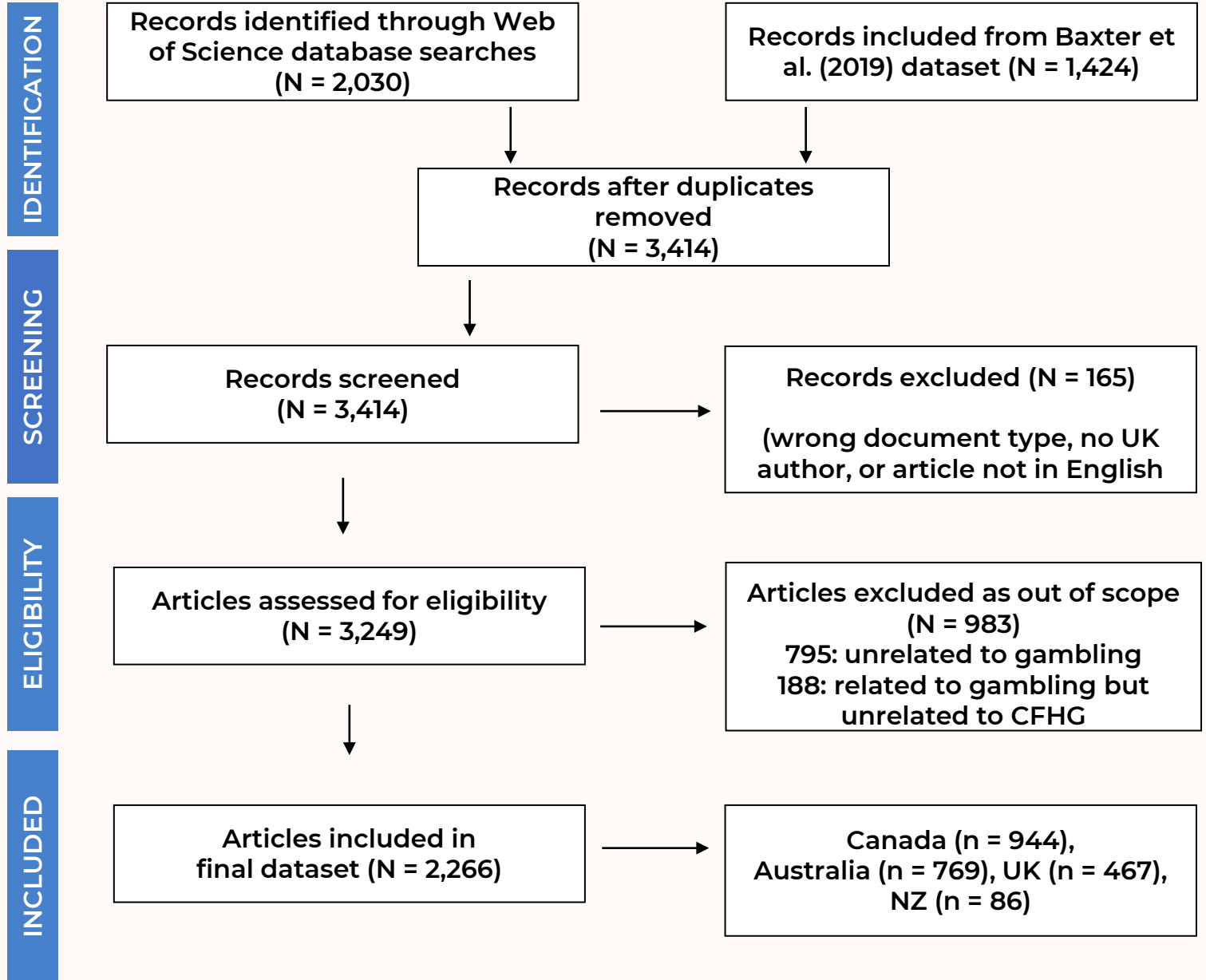
- How has the **volume** of Canadian gambling research output aligned with CFHG factors changed over time?
- What **knowledge gaps** exist for informing a public health approach to harmful gambling?
- To what extent do publication venues favoured by Canadian researchers demonstrate a **multidisciplinary** approach?
- How does Canada's research output and alignment with CFHG factors **compare** to other selected high-income nations?

# Bibliometric analysis

- Web of Science Core Collection searches plus manual retrieval
- Inclusion criteria:
  - “gambl\*” in the title, abstract, or keywords
  - Years: 2008 to 2019
  - At least one coauthor from Canada, Australia, New Zealand, or UK
- Publication types: research articles, reviews, meeting abstracts, editorials, letters
- Two coders, classify based on title and abstract (>90% inter-coder agreement)
- Excluded articles not mappable to a CFHG factor

# Study Results

# Flow Diagram for citation selection





# Canada: sample characteristics ( $N = 944$ )

## First author's affiliation by province

- Ontario - 41.0%
- Quebec - 23.2%
- Alberta - 15.9%
- BC - 10.7%
- Others - 9.1%

## Publication type

- Research articles – 83.6%
- Meeting abstracts – 6.5%
- Reviews – 6.3%
- Editorial material – 2.3%
- Letters – 1.4%

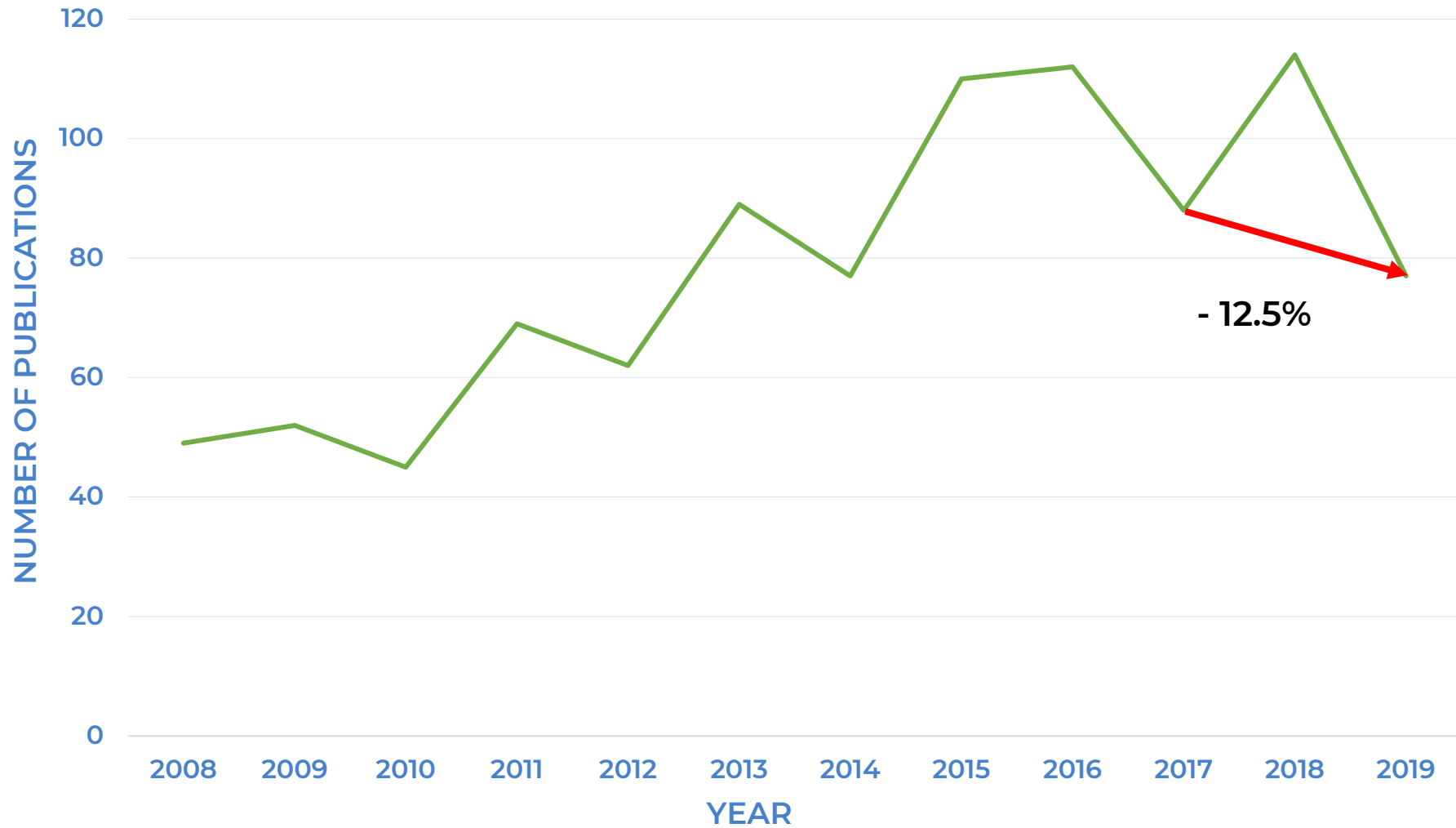
## Journal titles ( $N = 247$ )

- Three gambling studies journals = 34.6% (JGS, JGI, IGS)
- Top 15 journals = 59.9% of publications

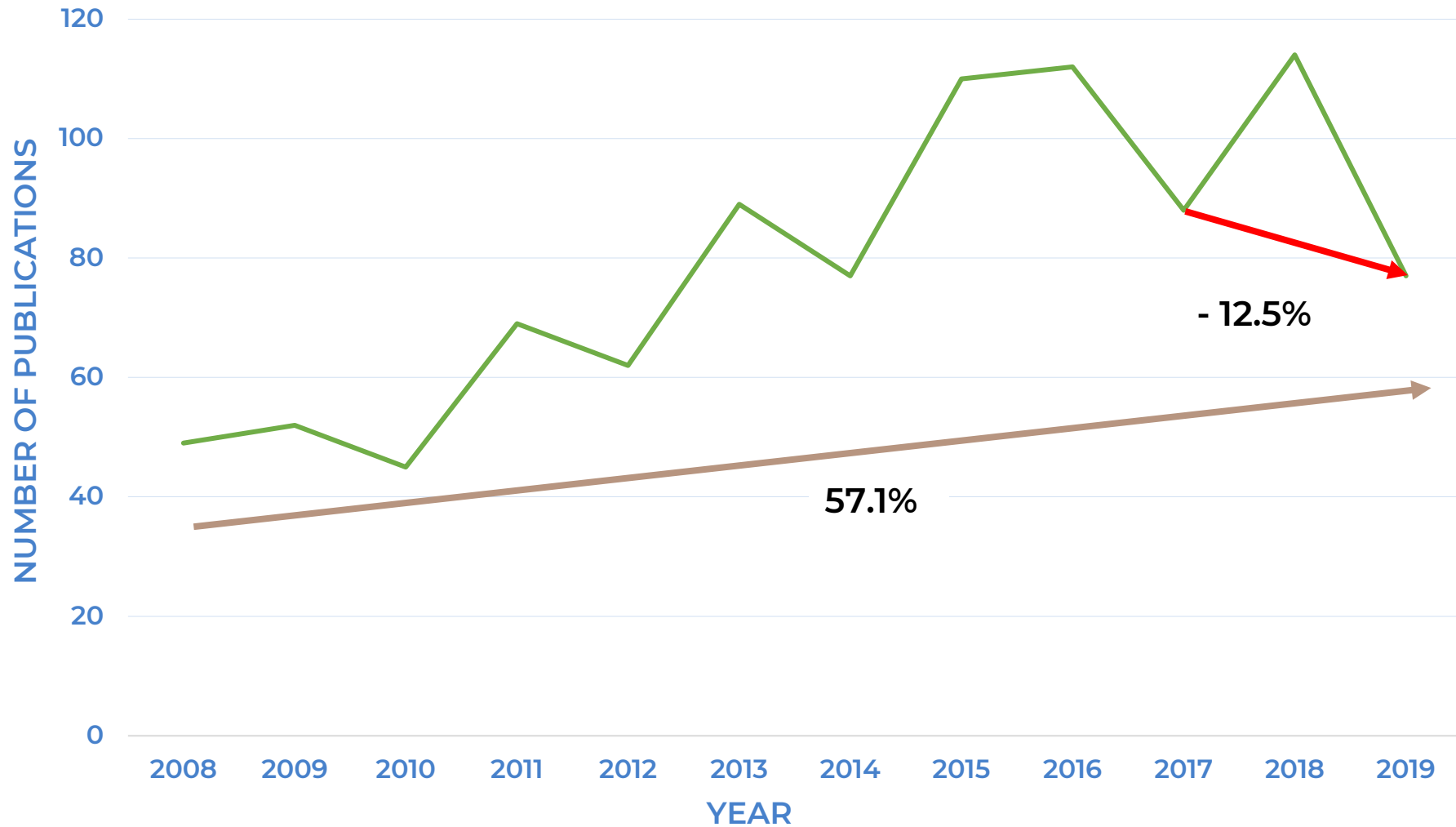
## Subfactors

- Assigned to 61.1% of publications

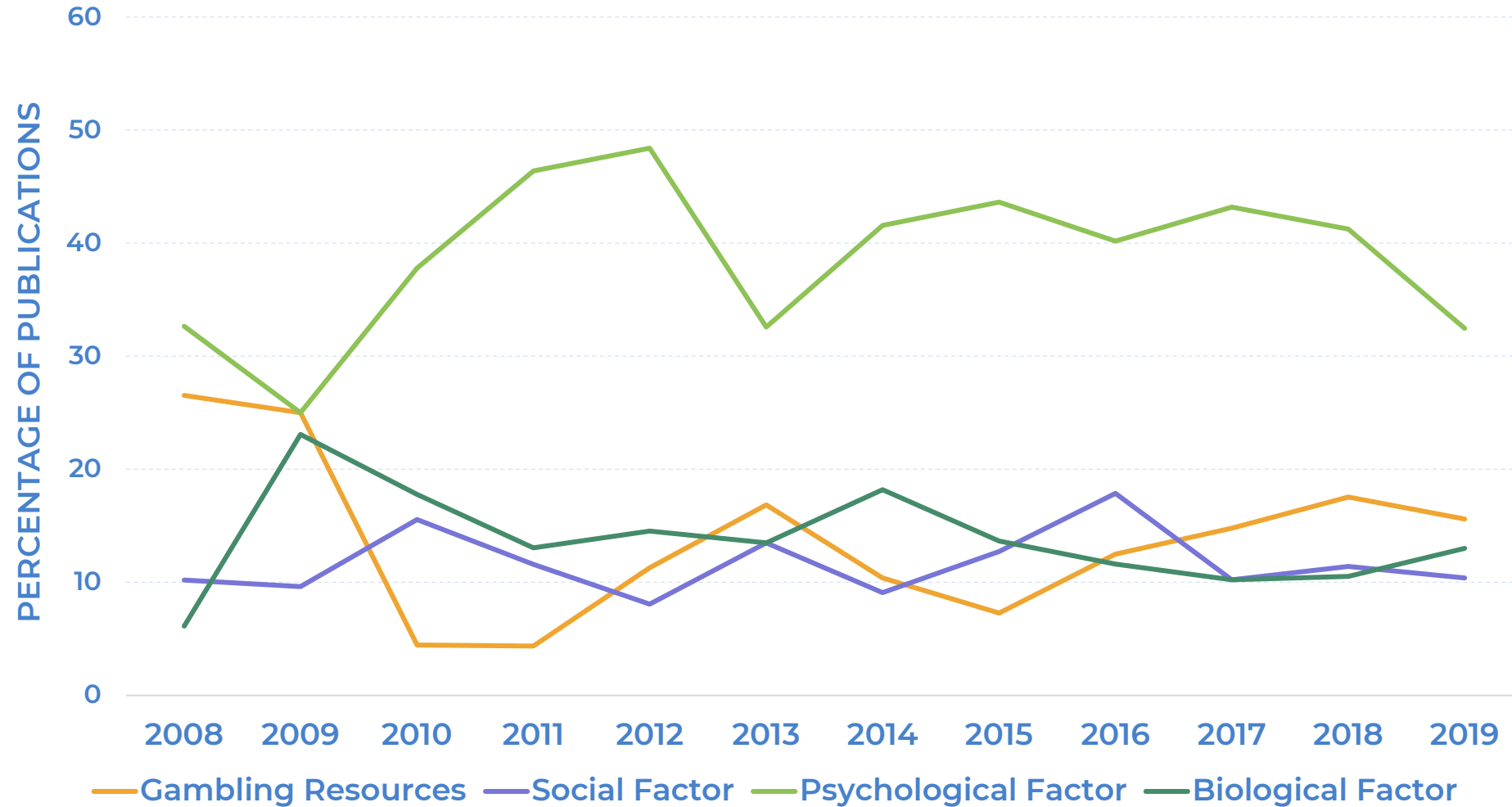
## VOLUME OF CFHG ALIGNED PUBLICATIONS, 2008-2019, CANADA



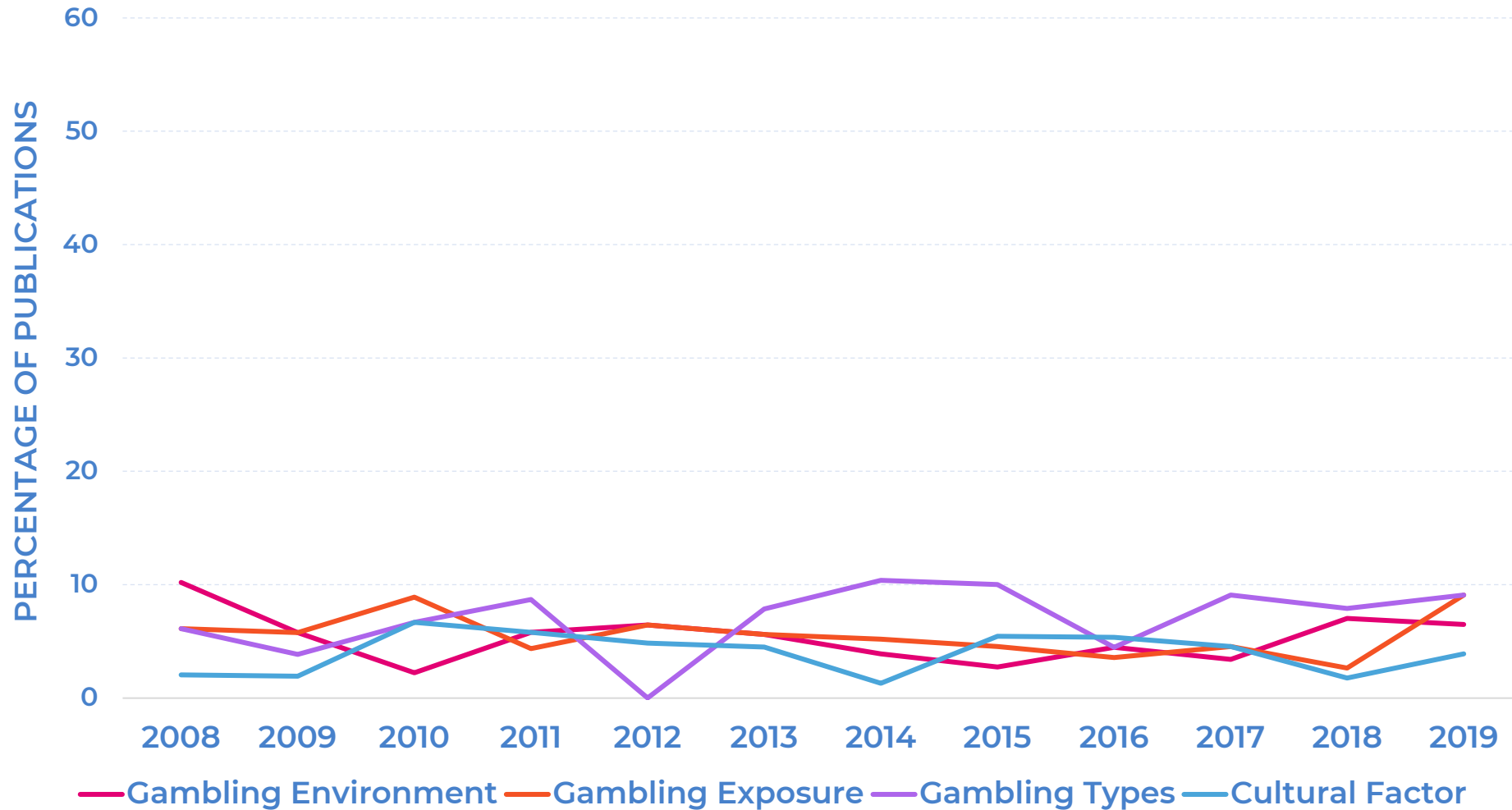
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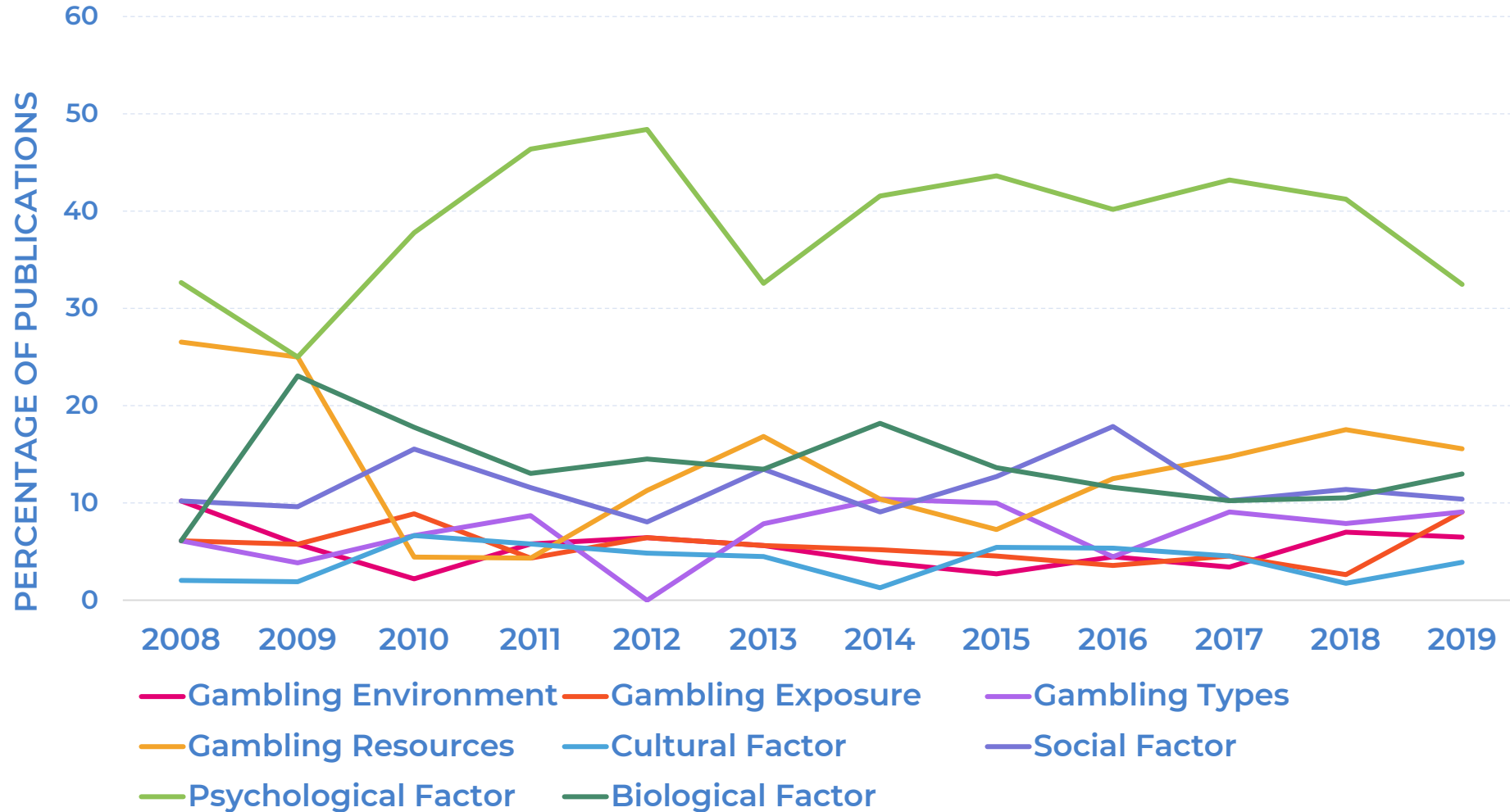
## PERCENTAGE OF PUBLICATIONS BY MOST ASSIGNED CFHG FACTORS, 2008 - 2019



## PERCENTAGE OF PUBLICATIONS BY LEAST ASSIGNED CFHG FACTORS, 2008 - 2019



## PERCENTAGE OF PUBLICATIONS BY CFHG FACTOR, 2008 - 2019



# Leading publication venues by CFHG factor, Canada, 2008-2019

JOURNAL	ENVIRONMENT	EXPOSURE	TYPES	RESOURCES	SOCIAL	CULTURAL	PSYCHOLOGICAL	BIOLOGICAL
Journal of Gambling Studies	✓	✓	✓	✓	✓	✓	✓	
Journal of Gambling Issues	✓	✓	✓	✓	✓	✓	✓	
International Gambling Studies	✓	✓	✓	✓	✓	✓	✓	
International Journal of Mental Health and Addiction		✓		✓	✓	✓	✓	
Addiction	✓		✓					✓
Journal of Behavioral Addictions		✓			✓	✓*		
Gaming Law Review and Economics	✓					✓*		
Psychology of Addictive Behaviors				✓*			✓	
Neuropsychopharmacology								✓
Canadian Journal of Experimental Psychology-Rev.Cdn.			✓					
Computers in Human Behavior				✓*				
Biological Psychiatry								✓
Psychophysiology								✓
Journal of Psychopharmacology								✓

\* Equal publication count

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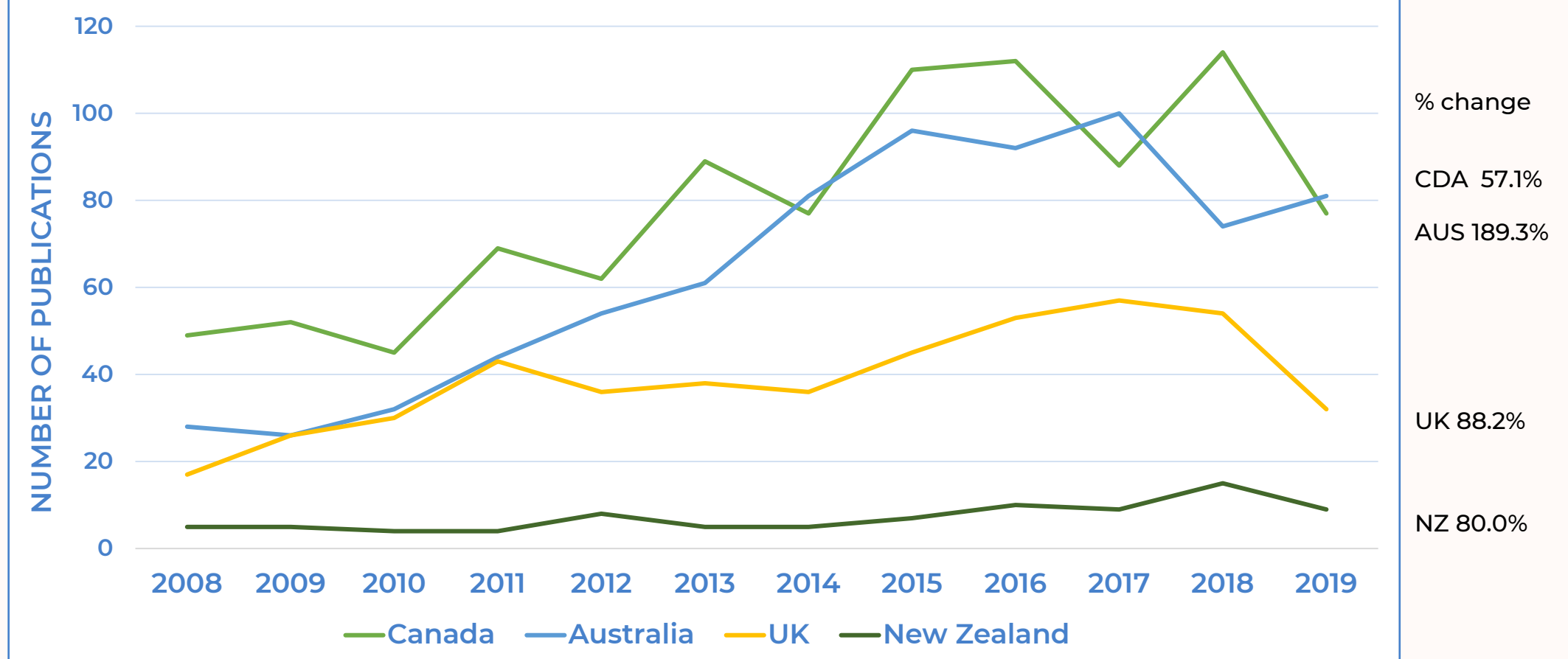
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# Subfactor representation

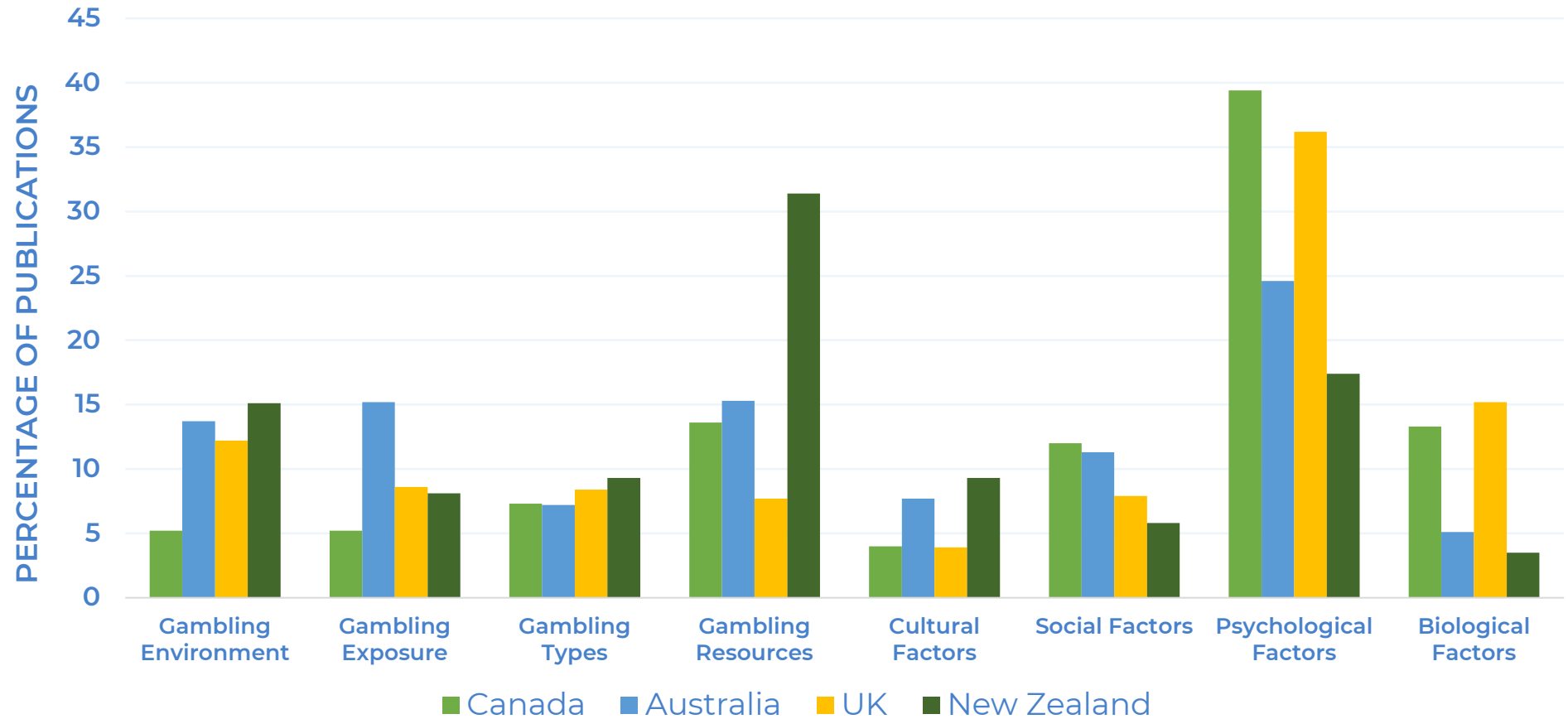
- Among the most well represented factors, the main subfactors are
- **PSYCHOLOGICAL:** comorbid disorders (21.2%), judgment and decision making (15.9%), personality and temperament (8.6%), lifespan development (7.5%)
  - **BIOLOGICAL:** neurobiology (65.9%), genetic inheritance (6.3%)
  - **GAMBLING RESOURCES:** interventions (46.9%); protection, prevention and harm reduction (3.9%)
  - **SOCIAL:** social demographics (24.8%), deviance (14.2%), family and peer gambling involvement (8.8%)

# International Context

## NUMBER OF PUBLICATIONS ALIGNED WITH A CFHG FACTOR BY COUNTRY AND YEAR (N = 2,266)



## PERCENTAGE OF PUBLICATIONS BY CFHG FACTOR AND COUNTRY, 2008-2019 (N = 2,266)



# Discussion and Implications

# Canadian research trends in CFHG alignment

- Canadian research output continues to fluctuate somewhat unpredictably
- Could be at least partially ascribed to government policy changes that directly influence funding for gambling research (e.g., Ontario & Manitoba cases)
- Psychological factor has decreased in recent years but continues to dominate
- Strongest representation from psychological, biological, gambling resources, and social factors → Biopsychosocial model (Ajdahi & Wolgast, 2008)



# Policy models and supporting evidence

## → **Medical model:**

- Supported by a substantial body of evidence in aligned CFHG factors
- Areas of greatest attention: comorbid disorders, judgement & decision making, personality & temperament; neurobiology; interventions

## → **Public health model:**

- Limited research evidence aligns with gambling environment, gambling exposure, gambling types, and cultural factors to address whole population
- More work is needed to support evidence-based, public health policy

# Publication diversity

## → Venues favoured for Canadian research

- **Expected:** strong representation of psychology, mental health, addiction, and neurology journals
- **Unexpected:** Only one social science journal, *Gaming Law Review and Economics*, in the top 15 list

## → Thinking about multidisciplinary

- Almost all factors had the top three gambling studies journals as their primary outlet for publications, followed by five with an addiction focus
- Are we talking to ourselves? We can contribute different perspectives and expertise to different fields and vice versa to benefit the evidence base

# Summing up

- CFHG provides a useful framework to understand strengths and limitations of the literature in relation to policy models
- If a public health approach is to be supported, need greater insights into factors external to the individual.
  - Needed to enhance the evidence base for gambling environment, gambling exposure, gambling types, and the cultural factor.
- Limitations:
  - Measured quantity but not quality
  - Examined academic literature only
  - Publications limited to one factor only for analysis

# Thank You

For more information contact: [margo@greo.ca](mailto:margo@greo.ca)  
Or visit: [www.greo.ca](http://www.greo.ca)